

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~A mechanical fuse composed of Fe-based sintered alloy,~~
comprising:

a driving portion to which rotating force is transmitted;

a driven portion to which the rotating force is transmitted from the driving portion; and

a rapture portion which transmits the rotating force from the driving portion to the driven portion and is broken when predetermined rotating force is loaded thereto;

wherein the rapture portion is composed of Fe-based sintered alloy, and

wherein the roundness of pores of the Fe-based sintered alloy is 0.004 or more so that the fatigue limit ratio determined by (fatigue strength)/(tensile strength) is 0.3 or more.

2. (Canceled)

3. (Previously Presented) The mechanical fuse according to claim 1, wherein an iron oxide phase is formed in a surface layer and pore inner wall.

4. (Previously Presented) The mechanical fuse according to claim 1, wherein at least one of Ni, Cu, Mo, Cr, and Mn is contained in a total amount of 0.7 to 5 mass %, and the C content in overall composition is 0.1 to 0.7 mass %.

5. (Previously Presented) The mechanical fuse according to claim 1, wherein a treatment for providing residual compressive stress is applied.

6. (Previously Presented) The mechanical fuse according to claim 5, wherein the treatment for providing residual compressive stress is shot peening.

7. (Currently Amended) ~~The mechanical fuse according to claim 5, A~~
mechanical fuse composed of Fe-based sintered alloy, wherein the roundness of pores of the

Fe-based sintered alloy is 0.004 or more, wherein a treatment for providing residual compressive stress is applied, and the treatment for providing residual compressive stress is mechanical plating.

8. (Previously Presented) The mechanical fuse according to claim 1, wherein a soft nitriding treatment is applied.

9. (Currently Amended) ~~The mechanical fuse according to claim 1, wherein a~~
mechanical fuse composed of Fe-based sintered alloy, wherein the roundness of pores of the Fe-based sintered alloy is 0.004 or more, and a zinc chromate film is coated on the surface.

10. (Currently Amended) ~~The mechanical fuse according to claim 1, A mechanical~~
fuse composed of Fe-based sintered alloy, wherein this mechanical fuse is interposed between two power transmission shafts and comprises an inner rim fixed to one power transmission shaft, an outer rim fixed to the other power transmission shaft, and plural arms for linking the inner rim and outer rim, which are formed integrally.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (New) The mechanical fuse according to claim 1, wherein the fatigue limit ratio is 0.35 or more.

17. (New) The mechanical fuse according to claim 1, wherein the driving portion, the driven portion, and the rapture portion are formed integrally.